

REMARKS

Claims 1-20 are pending. By this amendment, claims 19 and 20 are added. No new matter is involved. Support for the new claims is found throughout Applicants' original disclosure, including the main body of the specification and the drawings. Claims 1, 11 and 19 are independent.

Election of Species Requirement

Applicants continue to traverse the election of species requirement for the following reasons.

Applicants respectfully submit that any claim, including claims 2-7, which have been examined on their merits, and claims 8-10, that depend from claim 1, have to be examined with the elected species. The attention of the Examiner is directed to MPEP § 806.04(f) which points out that claims to be restricted to species must be mutually exclusive, i.e., for claims to be properly restricted to different species, those claims must recite the mutually exclusive characteristics of such species. Because claims 8-10 depend from claim 1, which is directed to the elected species, and claims 8-10 recite all the of the features of claim 1, then claims 8-10 recite features of the elected species and are not mutually exclusive from claim 1 because of this. Accordingly, claims 1 and 8-10 (along with claims 2-7) are not mutually exclusive and must be examined together.

In addition, upon further consideration, Applicants respectfully submit that independent claim 11 reads on the elected species (embodiment of Figs. 2-6), as indicated, below:

11. (Original) A washing machine (shown, e.g., in Fig. 2) comprising:
- a steam generator (24) for generating steam;
 - a circulation pump (28) for pumping circulation water discharged from a tub (14) and re-supplying the circulation water into a drum (16); and
 - a spray device (26) connected to the steam generator by a steam supply unit (34) and to a circulation pump (28) by a circulation line (38) so as to spray steam or circulation water into the drum (16),
- wherein the spray device (16) comprises:
- a main body (30) connected to the steam supply line and the circulation line;
 - a spray unit (26) formed at an end portion of the main body and spraying steam or circulation water into the drum (16) ;
 - a steam passage (50) formed inside the main body and supplying steam introduced through the steam supply line (34) to the spray unit (26); and
 - a circulation water passage (52) formed inside the main body and supplying circulation water introduced through the circulation line (38) to the spray unit (26).

Moreover, dependent claims 12-18 have to be examined along with independent claim 11 because they are dependent claims that recite each and every feature of claim 11 and, thus, are not mutually exclusive from claim 11 – see MPEP § 806.04(f), discussed above.

Accordingly, Applicants respectfully request that the election of species requirement be withdrawn and claims 8-18 be examined on their merits along with claims 1-7, which have already been examined on their merits.

Objection to the Specification

The specification is objected to because of various informalities, including two specifically mentioned mis-spelled words. In order to overcome this objection, Applicants have amended the specification to correct the spelling of the two noted mis-spelled words, and have made a number of other grammatical corrections to the specification, which has been carefully proofread.

Reconsideration and withdrawal of this objection are respectfully requested.

Rejections under 35 U.S.C. §103

Claims 1-4 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over GB 21286 to Jenkins in view of U.S. Patent 3,705,602 to Nordin or U.S.

Patent 6,397,874 to Featheringill. This rejection is respectfully traversed.

A complete discussion of the Examiner's rejection is set forth in the Office Action, and is not being repeated here.

Because the rejection is based on 35 U.S.C. §103, what is in issue in such a rejection is "the invention as a whole," not just a few features of the claimed invention. Under 35 U.S.C. §103, "[a] patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." The determination under §103 is whether the claimed invention as a whole would have been obvious to a person of ordinary skill in the art at the time the invention was made. See In re O'Farrell, 853 F.2d 894, 902, 7 USPQ2d 1673, 1680 (Fed. Cir. 1988). In determining obviousness, the invention must be considered as a whole and the claims must be considered in their entirety. See Medtronic, Inc. v. Cardiac Pacemakers, Inc., 721 F.2d 1563, 1567, 220 USPQ 97, 101 (Fed. Cir. 1983).

In rejecting claims under 35 U.S.C. §103, it is incumbent on the Examiner to establish a factual basis to support the legal conclusion of obviousness. See, In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the Examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148

USPQ 459, 467 (1966), and to provide a reason why one of ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal Inc. v. F-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the Examiner are an essential part of complying with the burden of presenting a *prima facie* case of obviousness. Note, In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992). To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be suggested or taught by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1970). All words in a claim must be considered in judging the patentability of that claim against the prior art. In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

A suggestion, teaching, or motivation to combine the prior art references is an “essential evidentiary component of an obviousness holding.” C.R. Bard, Inc. v. M3 Sys. Inc., 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998). This showing must be clear and particular, and broad conclusory statements about the teaching of multiple references, standing alone, are not “evidence.” See In re Dembiczak, 175 F.3d 994 at 1000, 50 USPQ2d 1614 at 1617 (Fed. Cir. 1999).

Moreover, it is well settled that the Office must provide objective evidence of the basis used in a prior art rejection. A factual inquiry whether to modify a reference must be based on objective evidence of record, not merely conclusory statements of the Examiner. See, In re Lee, 277 F.3d 1338, 1343, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002).

Furthermore, during patent examination, the PTO bears the initial burden of presenting a *prima facie* case of unpatentability. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). If the PTO fails to meet this burden, then the Applicant is entitled to the patent. Only when a *prima facie* case is made, the burden shifts to the applicant to come forward to rebut such a case.

Applicants respectfully submit that this rejection is improper for a number of reasons.

Initially, Applicants do not understand why the Examiner uses multiple alternative references to serve as multiple separate grounds of rejection which is a direct violation of the Manual of Patent Examination Procedure's statement that this is improper and should not be done. See, in this regard, MPEP §706.02. Applicants respectfully request that the Examiner select the best of the multiple secondary references and apply only one of them in this rejection.

Secondly, Jenkins does not disclose the claimed combination including the positively recited back-current preventing branch unit features. At best, Jenkins discloses a rather complex trunnion arrangement with various separate fittings including (1) a "gland and stuffing box F, (2) a stationary pipe G, (3) a pipe H¹, and (4) a separate cock G³ located in a separate pipe G¹.

Moreover, with respect to its Fig. 3 embodiment, Jenkins discloses only two alternatives. The first, found on pages 3, lines 10-19, is using a steam-jet injector to draw liquid up from pipe G¹ and forcing the liquid drawn up from pipe G¹ through the hollow trunnion C¹ into the chamber D and perforated pipes E. The second alternative, disclosed on page 3, lines 20-24, is not to force the liquid drawn up from pipe G¹ through the hollow trunnion C¹ into the chamber D and perforated pipes E but just force steam through the pipes. To accomplish this, Jenkins provides a cock (a hand operated valve) G³ in the pipe G¹ so that the liquid from the tank A will be prevented from rising in the pipe G¹ and only steam from the nozzle will pass into the chamber D.

There is absolutely no disclosure in Jenkins of providing a back-current preventing branch unit to prevent the recirculating liquid in the pipe G¹ from flowing back into a steam supply line and to prevent steam from flowing back to the circulation line. In fact, it appears that Jenkins' steam injector will continue to draw liquid from the recirculation line G¹ that is above the cock after the cock is closed due to a Venturi effect that serves as the basis for drawing the liquid from the recirculation line into the trunnion, and that Jenkins' steam would not flow into recirculation line G¹ because Jenkins uses a steam injector.

In order to overcome the shortcomings of Jenkins, the Office Action turns to either Nordin or Featheringill.

Nordin discloses a spring biased check valve for two inlet pipes 2 and 3 connected via valve housing 1 to outlet pipe 4. Each inlet pipe branch is connected to a pump. In other words, Nordin has two pumps, one that pumps a medium via inlet pipe 1 to outlet pipe 4, and another pump that pumps a medium via inlet pipe 2 to outlet pipe 4. Nordin controls the flow of fluid from the two inlet conduits using flaps 5 and 6.

Featheringill discloses a dual backflow check valve for use in a vacuum sewage system. The check valve prevents backflow of sewage into the service line and the branch line. Featheringill's check valve employs a hinged valve flap

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The Office Action speculates that it would have been obvious to modify Jenkins with Nordin or Featheringill to reduce contamination of the stream supply line and also for having control over the two supply lines simultaneously.

Applicants' respectfully disagree with this speculative conclusion for a number of reasons.

Firstly, Jenkins' device appears to work properly and demonstrates no need to be modified in any way. As a result, there is no objective factual evidence of record that one of ordinary skill in the art would be motivated to modify Jenkins at all. Moreover, Jenkins only discloses a single, manually operated, valve G³ that controls only one pipe G¹, and there is no teaching in Jenkins to motivate a skilled worker to use a single valve that controls two different pipes.

Secondly, Jenkins appears to have no need for a back-current preventing branch as recited because it uses a steam injector that deliberately permits recirculating water to be drawn into the drum after the cock is closed and will not permit recirculation water to enter and contaminate the steam supply line because of the way it operates to draw liquid into the drum, i.e., by a Venturi effect.

Thirdly, because Jenkins has no disclosure of the need for a back-current preventing branch, as claimed, and works for its intended purpose

without the need for such a feature, there is nothing in Jenkins that would provide proper motivation to one of ordinary skill in the art to modify Jenkins to provide such a feature in Jenkins. This is objective factual evidence that the only reason that Nordin and Featheringill were selected as alternative secondary references is because of Applicants' disclosure of this y-shape, and it is improper to use Applicants' disclosure against them, as it is improper reconstruction of Applicants' invention based solely on Applicants' disclosure.

Fourthly, in order to modify Jenkins in view of the y-shaped check valves of the alternatively supplied secondary references, one would have to significantly reconstruct the relatively straightforward piping arrangement shown in Fig. 3 of Jenkins and do away with the steam injector H of Jenkins. In other words, this significant operational element of Jenkins would have to be eliminated to achieve the proposed modification of Jenkins. This significant reconstruction of Jenkins is objective factual evidence that Jenkins teaches away from being modified as suggested.

Fifthly, both secondary references, i.e., Nordin and Featheringill, differ fundamentally from Jenkins, the primary reference and the Office Action fails to present objective factual evidence that one of ordinary skill in the art would be properly motivated to turn to either of these secondary references to modify Jenkins, as suggested. For example, Jenkins is related to washing machine pumps and does not disclose using a vacuum drain system, whereas

Featheringill is related to vacuum sewage systems, and the Office Action fails to provide objective factual evidence that one of ordinary skill in the art would be motivated to turn to the vacuum sewage art, in general, and Featheringill, in particular, to modify Jenkins, which shows no need to be so modified to work properly. Also, because Jenkins discloses an in-line control valve G3, no objective factual evidence is presented to motivate a skilled worker to replace this relatively simple valve with a far more complicated y-shaped valve. Additionally, the Office Action fails to provide objective factual evidence that one of ordinary skill in the art would be properly motivated to turn to Nordin's complicated Y-shaped non-return valve embodying a flap rotatably arranged in a pipe socket to replace Jenkins' in-line valve G3, especially where Jenkins does not have a y-shape to start with. If anything, this proposed modifications appears to be based solely on hindsight reconstruction of Applicants' invention based solely on Applicants' disclosure.

A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant. The degree of teaching away will of course depend on the particular facts; in general, a reference will teach away if it suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought by the applicant. See W.L. Gore & Assoc., Inc.

v. Garlock, Inc., 721 F.2d 1540, 1550-51, 220 USPQ 303, 311 (Fed. Cir. 1983) (the totality of a reference's teachings must be considered), cert. denied, 469 U.S. 851 (1984); In re Spinnoble, 405 F.2d 578, 587, 160 USPQ 237, 244 (CCPA 1969) (references taken in combination teach away since they would produce a "seemingly inoperative device"); In re Caldwell, 319 F.2d 254, 256, 138 USPQ 243, 245 (CCPA 1963) (reference teaches away if it leaves the impression that the product would not have the property sought by the applicant). See, In re Gurley, 31 USPQ2d 1130 (Fed. Cir. 1994).

Accordingly, the Office Action has not made out a *prima facie* case of proper motivation to modify Jenkins, as suggested, or to otherwise arrive at a modified version of Jenkins that would render the claimed invention obvious.

Claim 5-7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Jenkins in view of either Nordin or Featheringill as applied in the rejection of claims 1-4, and further in view of U.S. Patent 5,491,857 to Love. This rejection is respectfully traversed.

Complete discussions of the Examiner's rejections are set forth in the Office Action, and are not being repeated here.

Initially, the Jenkins/Norton or Jenkins/Featheringill reference combinations fail to render the invention recited in claims 1 and 2, from which claims 5-7 depend.

Moreover, Love is extremely non-analogous art and has not been shown to be directed to solving the same type of problem facing Jenkins or either alternative reference combination.

Love is directed to using a flat spray nozzle 100 shooting a high pressure sheet of water against the back of a continuously moving web of pile fabric to remove pile distortions in the fabric web – see col. 4, lines 10-55, for example. This has not been demonstrated in the Office Action to be even remotely related to using a nozzle to spray steam into a washing machine to wash, for example, individual garments or fabric pieces. In fact, the Office Action fails to present any argument whatsoever, let alone required objective factual evidence in support thereof, to explain why one of ordinary skill in the art would be motivated to look to a machine that sprays pressurized water on continuous fabric webs to remove pile distortions in the fabric web to design or modify the design of a spray nozzle for a washing machine.

Additionally, Applicants respectfully submit that one of ordinary skill in the art would have no motivation to radically redesign Jenkins, the base reference, to replace its perforated pipes E with their unique shapes with a nozzle like that of Love, which is designed for an entirely different purpose than spraying steam into a washing machine.

Accordingly, the Office Action fails to make out a *prima facie* case of obviousness of the invention recited in claims 5-7 and reconsideration and

withdrawal of this rejection of claims 5-7 are respectfully requested.

Claims 19-20

Claims 19-20 have been added for the Examiner's consideration. Applicants submit that these claims recite features neither disclosed nor suggested by any of the applied references, and are therefore believed to be allowable over the applied art. Additionally, claim 20 depends from claim 1 and is allowable for at least that reason.

Additional Cited References

Because the remaining references cited by the Examiner have not been utilized to reject the claims, but have merely been cited to show the state of the art, no comment need be made with respect thereto.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Robert J. Webster, Registration No. 46,472, at (703) 205-8000, in the Washington, D.C. area.

Prompt and favorable consideration of this Amendment is respectfully requested.

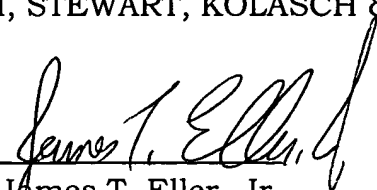
Applicants respectfully petition under the provisions of 37 C.F.R. § 1.136(a) and § 1.17 for a one-month extension of time in which to respond to the Examiner's Office Action. The Extension of Time Fee in the amount of **\$120.00** is attached hereto.


If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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